## EXHIBIT B



1751 bp

DNA

Limits Preview/Index History Clipboard Details

Format: GenBank FASTA Graphics More Formats \*\*

∛ Save ∜

GenBank: AF411317.1

# Pasteurella multocida 3-dehydroquinate synthase (aroB) gene, partial cds; and DNA adenine methylase (dam) gene, complete cds

## Features Sequence

AF411317

LOCUS

linear BCT 07-AUG-2003		
		Pasteurella multocida 3-dehydroquinate synthase
	(aroB) gene,	
		partial cds; and DNA adenine methylase (dam)
	gene, comple	
	ACCESSION	
		AF411317.1 GI:15705890
	KEYWORDS	• `
		Pasteurella multocida
	ORGANISM	Pasteurella multocida
		Bacteria; Proteobacteria; Gammaproteobacteria;
Pasteurellales;		
		Pasteurellaceae; Pasteurella.
	REFERENCE	1 (bases 1 to 1751)
	AUTHORS	Chen, L., Paulsen, D.B., Scruggs, D.W., Banes, M.M.,
	Reeks, B.Y. a	and
		Lawrence, M.L.
		Alteration of DNA adenine methylase (Dam)
	activity in	Pasteurella
		multocida causes increased spontaneous mutation
frequency and		
		attenuation in mice
	JOURNAL	Microbiology (Reading, Engl.) 149 (8), 2283-2290
	(2003)	
	PUBMED	12904568
	REFERENCE	2 (bases 1 to 1751)
	AUTHORS	Chen, L., Paulsen, D.B. and Lawrence, M.L.
	TITLE	Cloning, characterization, and expression of the
Pasteurella		
		multocida A1 dam gene
	JOURNAL	
	REFERENCE	3 (bases 1 to 1751)
	AUTHORS	
	TITLE	Direct Submission
	JOURNAL	Submitted (17-AUG-2001) College of Veterinary
	Medicine, M:	
		State University, PO Box 6100, Mississippi
	State, MS 39	
		USA

#### Change Region Shown

#### **Customize View**

Download ¥

#### Sequence Analysis Tools

#### BLAST Sequence Find regions of similarity between this sequence and other sequences using BLAST.

## Pick Primers Design and test primers for this sequence using Primer-BLAST.

## Recent Activity

Turn Off Clear

Pasteurella multocida 3-dehydroquinate

```
Location/Oualifiers
     source
                      1..1751
                      /organism="Pasteurella multocida"
                      /mol_type="genomic DNA"
                      /strain="ATCC11039"
                      /serotype="A1"
                      /db_xref="ATCC:11039"
                      /db_xref="taxon:747"
                      <1..716
     gene
                      /gene="aroB"
     CDS
                      <1..716
                      /gene="aroB"
                      /codon_start=3
                      /transl_table=11
                      /product="3-dehydroquinate synthase"
/protein_id="AAL05863.1"
                      /db_xref="GI:15705891"
                      /translation="IPTTLLAQVDSSVGGKTAVNHALGKN
MIGAFYOPCTVIIDTLTL
NSLPKREINAGLAEVIKYGAILDLPFFTWLEONIDSLVARDPDNLOTCIARCCOIKAD
VVARDETEKGDRALLNLGHTFGHAIETHLGYGHWLHGEAVAVGMLMAAVLSEKLGNLT
KTDVARLERLLARANLPTVSPDTMQPEDYLPHMLRDKKVLAGKLRLVLLASLGQAYVA
                      TDTDPALVLDAIRCCTOVN"
                      605..1625
     gene
                      /gene="dam"
     -35_signal
                      605..610
                      /gene="dam"
                      628..633
     -10_signal
                      /gene="dam"
     RBS
                      707..710
                      /gene="dam"
     CDS
                      720..1625
                      /gene="dam"
                      /codon start=1
                      /transl table=11
                      /product="DNA adenine methylase"
                      /protein id="AAL05864.1"
                      /db_xref="GI:15705892"
                      /translation="MPPRRKCPVKRPAIVGKKKAKLIPIK
HRPFLKWAGGKFRLSDEI
NKLLPKTNOCLIEPFVGAGAVFLNTNFERYILADINPDLINLFNFVKNDVEHYINASK
PLFFHPEANTSTFYYAKRTOFNLSKDPFERSVIFLYLNRFGFNGLCRYNSKNEFNVPF
GTYKRHYFPENELRYFAEKAQNAEFICADFQQTFSLADEKSIIYCDPPYAPLIQDSNF
TSYAGNEFSSLHQQMLAELARKTAEERQISVVISNHDTPFTRQIYQNAKIKALKVQRS
                      ISHOSARRIKVAELIAVFKGTPLAK"
ORTGIN
        1 gaatteegae aacettatta gegeaagttg attegteegt
agggggaaaa accgcqqtca
       61 atcatgcgct tggtaaaaat atgatcggtg cgttctatca
accttgtacg gtgatcatcg
      121 atacattaac cttaaacagt ttaccaaaac gagaaatcaa
tgcaggetta getgaagtga
      181 ttaagtatgg egegatttta gatetgeegt tetttaettg
gttggaacaa aatattgata
      241 gtctagtggc acgagatcca gacaatttac aaacctgtat
```

```
tgcacgttgt tgtcaaatta
      301 aggcagatgt tgtcgctcgc gatgaaacgg aaaaaggcga tcgcgcttta ttaaatttag
      361 ggcatacatt tggtcatgcg attgaaaccc acttagggta tgggcattgg ttacacggtg
      421 aagetgtgge ggttgggatg etaatggetg eggtaettte agaaaaaetg gggaatttga
      481 eqaagactga tgtggcacgt cttgaaagat tgctagctcg agccaactta ccgacagtct
      541 caccagatac tatgcaacct gaagactate taccacatat gctacgcgat aaaaaagtgc
      601 tegetggaaa attgegtete gtettattag egtetttagg teaggettat gtegeaaeag
      661 ataccgatec agegitagig ctagatgeta ttegttgttg cacgeaggit aattgattea
      721 tgccacctcg tcgaaaatgc ccggttaagc gccccgctat tgttggtaag aaaaaagcaa
      781 aattaateee tattaaacae egeeeetttt tgaagtggge aggtggtaaa tttegeetgt
      841 ctgatgaaat caataaactg ttgcccaaaa cgaatcaatg cttaattgag ccctttgttg
      901 gagegggtge agtetttttg aataccaatt ttgaacgtta tattttggeg gatattaate
      961 caqacttgat taacctgttt aattttgtca aaaacgacgt tgagcattat attaatgcga
     1021 geaageeact tttetteeac eetgaggeea ataccagtae gittiattat geaaagegta
     1081 cacagittaa tetticeaaa gateeattig aacgateagt gattittitta tactigaate
     1141 gttttggttt taatggactt tgtcgctaca attctaaaaa tgaatttaat gtgccgtttg
     1201 gtacttataa aagacattac titocagaaa atgageteeg tiattitgeg gaaaaageac
     1261 aaaatgcaga gtttatttgt geggatttee aacaaacett ttetttgget gatgaaaaat
    1321 egattattta ttgtgateea eettatgeac cattaattea ggacagtaat tttaccagtt
    1381 acqcaggcaa tgaattetet teaetgcaec aacaaatget tgetgagtta getegaaaaa
    1441 caqceqaaqa qeqecaqatt teqqtaqtaa ttteqaatea tqatacqeeq tttacqeqae
    1501 agatttacca gaatgotaaa attaaagoto tgaaagtaca goqttcaatt agtcatcaat
    1561 eggcacgeeg gattaaagtg gcagaattaa ttgcagtatt caaagggaca cetettgeta
    1621 agtaatcaag aagacgateg etttgagegg getttgatgt gaaaagagae gttageaaaa
    1681 gagattaggo gtgatagtga attitattit titcactica ggatagtett gatgaatgeg
    1741 tgctaatate g
```

Write to the Help Desk
NGBI NLM I NIH
Department of Health & Human Services
Privacy Statement I Freedom of Information Act I Disclaimer